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EVERYONE COMPLAINS ABOUT THE WEATHER, BUT NO ONE EVER DOES ANYTHING ABOUT IT: INTERJURISDICTIONAL FAILURE TO DESIGNATE RESPONSIBLE PARTIES FOR THE CLIMATE CRISIS

FEDERICO CHEEVER[†]

INTRODUCTION

The evolving response to the approaching climate crisis challenges the assumptions on which many groups of policymakers rely to make sense of the world around them. It has dramatically broadened our notion of what constitutes an environmentally significant transaction. It has altered our view of the relationship between developed and developing countries.¹ It shows every sign of transforming our notions of international governance and, within the United States, our ideas of federalism.² In biodiversity preservation, it has called into question the "reserve system strategy," which has been—without question—the dominant approach to preservation for decades.³ It may alter our understanding of the meaning of justice. The whole thing makes us dizzy.

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^{1.} Cinnamon Carlarne, Climate Change—The New "Superwhale" in the Room: International Whaling and Climate Change Politics—Too Much in Common?, 80 S. CAL. L. REV. 753, 767-70 (2007) (discussing the refusal of major greenhouse gas emitters—the developed U.S. and the rapidly developing China and India—to embrace emissions restrictions, unlike many European countries); Paul G. Harris, The European Union and Environmental Change: Sharing the Burdens of Global Warming, 17 COLO. J. INT'L ENVTL. L. & POL'Y 309, 315-19 (2006) (discussing developing countries' desire to be treated as equals with developed countries during international climate change negotiations, and the philosophical differences in how developed and developing countries view the greenhouse gas problem: that is, that developed countries see it as an environmental problem while developing countries see it as a human-welfare concern).

^{2.} Kirsten H. Engel, Harnessing the Benefits of Dynamic Federalism in Environmental Law, 56 EMORY L.J. 159, 177-81 (2006) (opining that an effective means of addressing climate change is to maintain "overlapping" state and federal jurisdiction over environmental issues); Kirsten H. Engel, The Dormant Commerce Clause Threat to Market-Based Environmental Regulation: The Case of Electricity Deregulation, 26 ECOLOGY L.Q. 243 (1999) (explaining that state market-based environmental regulations could potentially result in Commerce Clause violations and suggesting means by which states may be able to carry out efficient market-based environmental regulations without risking constitutional violations); Kirsten H. Engel, State Environmental Standard-Setting: Is There a "Race" and Is It "To the Bottom"?, 48 HASTINGS L.J. 271, 359, 367-69 (1997) (discussing the need for some form of federal environmental regulation in order to avoid the tendency of some states to impose relaxed environmental standards so as to increase their competitive edge in interstate industry).

^{3.} See generally CLIMATE CHANGE AND BIODIVERSITY (Thomas E. Lovejoy & Lee Hannah eds., Yale Univ. Press 2006) (describing climate change biology in light of social concerns, conservation, and public policy); Cornelia Dean, *The Preservation Predicament*, N.Y. TIMES, Jan. 29, 2008, at F1 ("Conservation organizations that work to preserve biologically rich landscapes are

Lawyers, as a profession, have been particularly disoriented by this dramatic change in the shape of the projected future. Our traditional skills seem quaint in a world of impending global cataclysm and prospective gee-whiz technology. Faced with the unknown we are, as always, prisoners of popular culture. Lawyers—as lawyers—never play a significant role in disaster movies. The best we have ever been able to hope for in the face of an asteroid strike, alien epidemic, or monster from the deep is the authority that comes from the fact that most elected officials are lawyers.⁴ Legal skills have never seemed important when the fictional President or Prime Minister decides to evacuate New York or calls out the army to stop Godzilla. This image of lawyers in times of fictitious disaster has shaped the legal academic response to the real climate crisis: We exercise our judgment, playing economist,⁵ social scientist,⁶ moral philosopher,⁷ atmospheric scientist,⁸ or all four, as we consider what to do, but we do not "lawyer."

However, lawyers—as lawyers—are central to fashioning a response to the climate crisis not only for our judgment and ability to give inspiring speeches in times of crisis but also for our traditional legal habits of mind. When we, as lawyers, face a new threat or cost that society will bear we endeavor to: (1) identify responsible parties to bear that cost; (2) identify mechanisms to spread that cost equitably among those responsible parties; and (3) identify measures to reduce that cost to the

confronting a painful realization: In an era of climate change, many of their efforts may be insufficient or beside the point.").

^{4.} LEE HANNAH ET AL., BIODIVERSITY AND CLIMATE CHANGE IN CONTEXT, CLIMATE CHANGE AND BIODIVERSITY 3, 7-13 (Thomas E. Lovejoy & Lee Hannah, eds., Yale Univ. Press 2005); Dean, *supra* note 3, at F1.

^{5.} E.g., Ari Bessendorf, Games in the Hothouse: Theoretical Dimensions in Climate Change, 28 SUFFOLK TRANSNAT'L L. REV. 325, 347-49 (2005) (describing the problem of greenhouse gas emissions in terms of market systems and game theory).

^{6.} E.g., Kirsten H. Engel, Mitigating Global Climate Change in the United States: A Regional Approach, 14 N.Y.U. ENVTL. L.J. 54, 60-62 (2005) (opining that while state efforts to reduce greenhouse gas emissions appear irrational when examined under standard economic theory, other motivations have nonetheless caused some state and local governments to take action to reduce emissions).

^{7.} E.g., Mary Christina Wood, Keynote Address: Government's Atmospheric Trust Responsibility, 22 J. ENVIL. L. & LITIG. 369 (2007) (opining that the government has a moral trust responsibility to protect the environment from a "climate emergency"); Mary Christina Wood, Nature's Trust: A Legal, Political and Moral Frame for Global Warming, 34 B.C. ENVIL. AFF. L. REV. 577, 598, 603 (2007) (discussing the seriousness of global warming and suggesting that the government has a moral obligation to protect the environment).

^{8.} E.g., William C. Burns, Global Warming—The United Nations Framework Convention on Climate Change and the Future of Small Island States, 6 DICK. J. ENVTL. L. POL'Y 147, 150-66 (1997) (discussing the scientific causes of global climate change and the validity of computerized climate models for forecasting the effects of climate change); William C. Burns, The Second Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change: More Heat than Light?, 8 COLO. J. INT'L ENVTL. L. & POL'Y 153, 154-56 (1997) (discussing the scientific basis for the greenhouse effect).

2008]

degree possible. On items two and three, we are wise to work with experts in other disciplines. On item one, we tend to ride alone.⁹

To date, the legal debate regarding climate change has been driven largely by items two and three in the list above: the search for mechanisms to spread costs among responsible parties and measures to mitigate those costs. It has deemphasized, most remarkably at the federal level and the international level, the identification of responsible parties.

The identification of responsible parties, however, is an essential first step toward any workable legal mechanism. Both the processes of identifying mechanisms to spread cost and measures to reduce cost depend, to a significant degree, on identifying who is responsible, why they are responsible, and what they can do about it.

Professor Daniel Farber initiated a related inquiry in his 2007 article *Basic Compensation for Victims of Climate Change.*¹⁰ However, his preliminary discussion focused primarily on using existing liability doctrines as tools for providing compensation for the victims of the climate crisis. In contrast, I suspect that the unprecedented nature of the crisis will force the evolution of unique theories of responsibility, whatever traditional labels we endeavor to affix to them. Without a doubt, legislatures (international, national, and intra-national), will play an essential role in shaping the structure of responsibility. Courts undoubtedly will play a role as well. They will engage in a complex dance that defies easy prediction.

As Professor Farber observes, "[t]he tort system—and, by extension, other compensation schemes—has several goals. Probably the two most important are deterring harmful conduct (the efficiency or deterrence rationale) and corrective justice (that is, restoring moral balance by rectifying harm)."¹¹ These policy considerations extend beyond compensation schemes to any structure of responsibility. Questions of "deterrence" and "corrective justice" cannot be answered without identifying responsible parties.

Still, there is a temptation to treat climate change as "the weather": to treat climate change as something which is no one's responsibility and, therefore, to treat its consequent costs—be they costs of prevention or adaptation—as something we should all bear equally. In fact, the responsibility for the climate crisis does not fall equally on all entities in society and we should not pretend that it does. Some entities have

^{9.} See Palsgraff v. Long Island R.R. Co., 162 N.E. 99, 101 (N.Y. 1928) (holding that a party is not liable for negligence unless damage was caused by a reasonably foreseeable risk).

^{10.} See generally Daniel A. Farber, Basic Compensation for Victims of Climate Change, 155 U. PA. L. REV. 1605 (2007).

^{11.} Id. at 1640.

gained far more from the creation of the current crisis than most of us. Some entities have far more power to stop or limit it.

This temptation to treat climate change as the weather-and thereby sever our discourse about it from the designation of responsible partiesmay explain the wild popularity of tradable permit ("cap and trade") programs as proposed legislative solutions. In more than four decades of environmental law, the United States Congress has mandated only one national cap and trade program for pollutants-the sulfur dioxide trading regime initiated in Title IV of the Clean Air Act Amendments of 1990.¹² However, as far as I have been able to ascertain, every significant national legislative proposal to deal with climate change is built around a cap and trade system. Others, including Al Gore in his Nobel Lecture in December 2007,¹³ have compared the effectiveness of cap and trade svstems with the effectiveness of carbon tax proposals (and found carbon tax proposals superior).¹⁴ I am interested in the designation of responsible parties. In my frame of reference, tradable permit schemes are significant primarily as a symptom of our desire to avoid designating responsible parties.

Among political structures in the United States, it is the states¹⁵ that have been willing to start the inquiry into what to do about the climate crisis with the process of identifying responsible parties.¹⁶ In public nui-

Al Gore. Nobel Lecture. Oslo (Dec. 10. 2007). available at 13. http://nobelprize.org/nobel prizes/peace/laureates/2007/gore-lecture en.html ("And most important of all, we need to put a price on carbon—with a CO_2 tax that is then rebated back to the people, progressively, according to the laws of each nation, in ways that shift the burden of taxation from employment to pollution. This is by far the most effective and simplest way to accelerate solutions to this crisis.") (emphasis added).

14. Christina K. Harper, Climate Change and Tax Policy, 30 B.C. INT'L & COMP. L. REV. 411, 454-60 (2007).

^{12. 42} U.S.C.A. § 7651 (West 2008) (establishing the sulfur dioxide trading program). See generally Peter Berck & Gloria E. Helfand, The Case of Markets Versus Standards for Pollution Policy, 45 NAT. RESOURCES J. 345 (2005) (discussing the sulfur dioxide permitting process instituted by Title IV of the Clean Air Act); Jeffrey M. Hirsch, Emissions Allowance Trading Under the Clean Air Act: A Model for Future Environmental Regulations?, 7 N.Y.U. ENVTL. L.J. 352 (1999) (examining the context and effectiveness of the Title IV legislation).

^{15.} According to the magnificent climate change litigation chart prepared by Arnold & Porter under the direction of Michael Gerrand, there also have been two instances of common law tort litigation involving climate change. The two cases, *Comer v. Murphy Oil USA, Inc.*, No. 1:05-CV-436 (S.D. Miss. 2006) (dismissed August, 2007) (appeal pending) and *Korsinsky v. EPA*, 2005 WL 2414744 (S.D.N.Y. 2005) (dismissed), *aff'd* 2006 WL 2255110 (2d Cir. 2006), were summarily dismissed. *See* html:http://www.arnoldporter.com/resources/documents/Climate_Change_Litigation_Chart_123107.mht!Climate_Change_Litigation_Chart_123107.files/slide0004.htm.

^{16.} See, e.g., California ex rel. Lockyer v. Gen. Motors Corp., No. C06-05755 (N.D. Cal. Sept. 17, 2007), available at http://www.cand.uscourts.gov/cand/judges.nsf/61fffe74f99516d088256d480060b72d/61c396eab91-211868825735900798cf7/\$FILE/57550rderdism.pdf (dismissing plaintiff's public nuisance claim for damages against automobile manufacturers which generate huge volumes of greenhouse gas emissions and allegedly contribute to global warming); Connecticut v. Am. Elec. Power Co., 406 F. Supp. 2d 265 (S.D.N.Y. 2005) (dismissing public nuisance suits filed by the states of Connecticut, New York, California, Iowa, New Jersey, Rhode Island, Vermont, and Wisconsin, as well as the City of New York and non-profit land trusts against electric utility companies seeking that the companies abate their emission of greenhouse gases because of the gases' contribution to global warming).

sance suits brought by a variety of states, most notably Connecticut and California, plaintiffs have alleged the existence of specific classes of responsible parties. To date, these cases have been dismissed in federal court in deference to past and future federal legislative processes which offer little or no promise of designating responsible parties. This is unfortunate. If allowed to proceed, the fact-finding process these suits would require could inform decision making at every level of government. The current gestational process regarding our national response to the climate crisis needs to incorporate the states' responsible party analysis into the policymaking process.

I. WHAT'S A LAWYER TO DO?

I have wondered about my role in fashioning a response to the approaching climate crisis. The literature I dutifully read seems unevenly divided between: (1) statements of the need for radical global reductions of greenhouse gas emissions based on dire predictions generated by fantastically complex computer models;¹⁷ (2) assessments of mindbendingly advanced technologies which may (or may not) be part of a solution but which always require twenty minutes (and a diagram) to explain;¹⁸ and (3) economic analyses proving beyond any doubt that all the wonderful technologies may not be cost effective but that solving the problem is.¹⁹

My role as a citizen is fairly straightforward. As a matter of personal choice, I do what Al Gore tells me to do: Endeavor to reduce my personal carbon footprint and vote for candidates who are willing to admit the problem exists and willing to do something about it.

Someday there will be rules—a very complex set of rules by all indications. We lawyers will be able to battle over their meaning and application ("Mr. Brown invested \$50,000 in carbon credits under the assumption that. . . ."). Right now, however, in the essential gestational phase of what promises to be one of the most significant social-legal regulatory structures in at least a generation, what are we good for?

See, e.g., NICHOLAS STERN, STERN REVIEW ON THE ECONOMICS OF CLIMATE CHANGE, 17. http://www.hm-treasury.gov.uk/independent reviews/stern review economics available at climate change/stern review report.cfm (last visited Mar. 26, 2008); UK METEOROLOGICAL HADLEY CENTRE CLIMATE OFFICE. MODELS. available at http://www.metoffice.gov.uk/research/hadleycentre/models/modeltypes.html (last visited Mar. 26, 2008) [hereinafter OFFICE]; INT'L INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, REPORTS, available at http://www.ipcc-wg2.org [hereinafter PANEL].

^{18.} See, e.g., Alan Carlin, Global Climate Change Control: Is There a Better Strategy than Reducing Greenhouse Gas Emissions?, 155 U. PA. L. REV. 1401, 1401 (2007) (proposing that the optimum means of addressing climate change problems is to decrease radiation by "adding particles optimized for this purpose to the stratosphere to scatter a small portion of the incoming sunlight back into space" and also to reduce acidification in the ocean).

^{19.} See, e.g., STERN, supra note 17.

What do most of us know about liquefied carbon dioxide,²⁰ oceanic acidification,²¹ or global dimming?²²

My question is—of course—rhetorical. It is rhetorical both in the sense that I think I already have an answer and rhetorical in the sense that it sets up the point I am trying to make. I think we have a lot to add at this stage, and I think we have not been doing our job.

II. THINKING LIKE A LAWYER (ABOUT CLIMATE CHANGE)

Before I can explain the role we lawyers should play, there is a necessary preliminary step: a reorientation. Rather than applying legal analysis to scientific or political formulations about the climate crisis, I think we can (and must) reformulate the problem in traditional legal terms. This I will now—modestly—attempt to do.

First, if the scientists are right, climate instability poses the greatest threat to the global ecosystem, human liberty, private property, and "distinct investment-backed expectations"²³ over the next few centuries.

In 2007, the United States Fish and Wildlife Service (FWS), in response to a petition from the Center for Biological Diversity, published a proposed rule to list the Polar Bear as a threatened species under the Endangered Species Act.²⁴ It did this not because the species was being hunted, or because humans were occupying more of its habitat, but because of "the [potential] decrease of sea ice coverage."²⁵ The proposed rule explained that:

Although some [polar bear] females use snow dens on land for birthing cubs, polar bears are almost completely dependent upon sea ice for their sustenance. Any significant changes in the abundance, distribution, or existence of sea ice will have effects on the number and behavior of these animals and their prey.²⁶

Although well buried in the proposed rule, FWS admits:

26. Id.

^{20.} See David G. Hawkins, Daniel A. Lashof & Robert H. Williams, *What to Do About Coal*, SCI. AM., Sept. 2006, at 68-75 (discussing geologic carbon sequestration during coal processing).

^{21.} See generally GERMAN ADVISORY ON GLOBAL CHANGE (WBGU), THE FUTURE OCEANS—WARMING UP, RISING HIGH, TURNING SOUR, SPECIAL REPORT (2006), available at http://www.wbgu.de/wbgu_sn2006_en.pdf; THE ROYAL SOCIETY OF THE UNITED KINGDOM, OCEAN ACIDIFICATION DUE TO INCREASED ATMOSPHERIC CARBON DIOXIDE, Policy Doc. 12/05 (June 2005), available at http://www.royalsoc.ac.uk/displaypagedoc.asp?id=13539.

^{22.} See Gerald Stanhill & Shebtai Cohen, Global Dimming: A Review of the Evidence for a Widespread and Significant Reduction in Global Radiation with Discussion of Its Probable Causes and Possible Agricultural Consequences, AGRIC. & FOREST METEOROLOGY, Apr. 2001, at 255 (discussing the possible causes, effects, and need for future research regarding the reduced levels of solar radiation that are reaching the surface of the earth).

^{23.} Penn-Central Transp. Co. v. City of New York, 438 U.S. 104, 124 (1978).

^{24.} U.S. Fish & Wildlife Service—Alaska, Proposal to List the Polar Bear as Threatened Under the Endangered Species Act (Dec. 18, 2007), http://alaska.fws.gov/fisheries/mmm/polarbear/ issues.htm#.

^{25.} Id.

[P]revious projections regarding the rate and extent of climate change underestimated the temperature trend, reductions to annual sea ice during the summer and winter periods, reductions to multi-year pack ice, and reductions in thickness . . . indicated that the Arctic is moving toward a new "super interglacial" state that falls outside of natural glacial-interglacial periods that have characterized the past 800,000 years. . . There is no paleoclimatic evidence for a seasonally ice-free Arctic during the past 800,000 years.²⁷

As FWS makes clear, the costs of the climate crisis will not be evenly distributed. Scientists all over the world have documented the potential damage to ecosystems, not just in the Arctic but also in warmer climes. In April 2007, the United Nations' Intergovernmental Panel on Climate Change predicted "widening droughts in southern Europe and the Middle East, sub-Saharan Africa, the American Southwest and Mexico, and flooding that could imperil low-lying islands and the crowded river deltas of southern Asia."²⁸

The damage will affect more than ecosystems. In their letter in *Na*ture in 2005, prominent Indian scientists Sujatha Byravan and Sudhir Chella Rajan identified one of the "ironies" of climate change²⁹ as the probability that "although wealthy countries are responsible for most of the accumulated greenhouse gases in the atmosphere, they will . . . face less damage than poor countries."³⁰ Many of the areas of the globe that are projected to be most affected by the climate crisis are also home to the poorest human populations.

No lawyer who represents underprivileged human communities—in the Arctic, in the tropics or elsewhere—can imagine for a moment that his or her clients will be spared the brunt in the social reshuffling that "adaptation" to the climate crisis will require. Arguably, the climate crisis is already having an effect on the immigration debate in Europe and the United States, and the politics are not encouraging. Nicholas Stern's *The Economics of Climate Change: The Stern Review* estimates that by the middle of the twenty-first century, 150 to 200 million people

^{27.} Endangered and Threatened Wildlife and Plants, 72 Fed. Reg. 1064, 1071 (Jan. 9, 2007) (to be codified at 50 C.F.R. pt. 17), available at http://alaska.fws.gov/fisheries/mmm/polarbear/pdf/Polarbear_proposed_rule.pdf.

^{28.} James Kanter & Andrew C. Revkin, Scientists Detail Climate Changes, Poles to Tropics, N. Y. TIMES, Apr. 7, 2007, at A1.

^{29.} Sujatha Byravan & Sudhir Chella Rajan, Immigration Could Ease Climate-Change Impact, NATURE, Mar. 24, 2005, at 435.

^{30.} Id.

may have become permanently displaced by climate change.³¹ The prospect of the legal institutions we may create to control the 200 million refugees projected to result from unchecked climate instability chills the blood.

At the same time, the climate crisis will do what the Fifth Amendment to the United States Constitution forbids: It will "take" property, both by physical invasion (e.g., floods and mudslides) and by depriving owners of all reasonable use of their property. It will also take property without compensation. The Stern Review estimates that a continuation of "business as usual" will result in an average reduction in global per capita consumption of a minimum of 5.5 percent by 2200.³² According to The Stern Review, adding the reduction of measurable per capita consumption to the estimated costs of direct impacts on human health and the environment ("non-market" impacts) increases that cost to 13.8 percent of per capita consumption.³³ Adding these estimates to the projected costs of amplifying feedback loops and the disproportionate share of the burden falling on developing countries less well positioned to adapt leads The Stern Review to estimate a 24.4 percent reduction in current per capita consumption,³⁴ "now and forever." Whether a five percent or a 24 percent reduction, the projected multi-trillion dollar reductions in global consumption estimated in The Stern Review signify something like the collapse of civilization. A lot of things just will not be worth what they used to be. A lot of property will not be worth anything at all.

Addressing the problem immediately and effectively does not make issues of cost and responsibility evaporate. If the *Stern* economists are right, addressing the problem (and thereby protecting, to the degree possible, those rights we hold dear) will also be expensive. *The Stern Review* indicates that aggressively addressing climate change will be cost effective—averting between a five percent and 24 percent loss in global consumption—at the cost of only about one percent world Gross Domestic Product (GDP) annually.³⁵ A good bargain, surely. Still, one percent of the roughly 48 trillion dollar current annual global GDP³⁶ is a little under 500 billion dollars a year. That is roughly what the war in Iraq has cost the United States so far.³⁷ Who should pay that cost?

^{31.} STERN, *supra* note 17, at 77.

^{32.} *Id.* at 144.

^{33.} Id. at 155-56.

^{34.} Id. at 144.

^{35.} Id. at 249.

^{36.} WORLD BANK, TOTAL GDP 2006 4 (2007), http://siteresources.worldbank.org/ DATASTATISTICS/Resources/GDP.pdf.

^{37.} NATIONAL PRIORITIES PROJECT, THE WAR IN IRAQ COSTS, http://www.nationalpriorities. org/costofwar home (last visited Mar. 26, 2008).

2008] INTERJURISDICTIONAL FAILURE

The costs of the climate crisis—be they the costs of climate instability or the costs of averting climate instability and most probably both will initially be borne by a variety of people who, through no fault of their own, find their islands underwater,³⁸ their farms too parched to yield a crop,³⁹ their city neighborhoods repeatedly battered by hurricanes,⁴⁰ their prime Florida condominium development sites turned into wetlands,⁴¹ or their planned coal fired power plants delayed or stopped.⁴² Should these victims of the human-caused climate crisis be forced to bear these catastrophes without compensation? If they are entitled to compensation, from whom should they seek it?

As Professor Farber puts it:

In a country whose political process is only now awakening to the reality of the climate change issue, it may seem almost utopian to worry about compensation. Current litigation is likely to attract more attention to the issue, as will some current endorsements of the idea in international law. If the issue is not in the forefront today, it seems safe to predict that it will be soon.⁴³

So the climate crisis is, after all, a constellation of very familiar kinds of legal problems. It is about avoiding harms, protecting rights and expectations, marshaling resources to fix a problem, and compensating those injured by the conduct of others. It is about justice. Lawyers, breathe a sigh of relief. We are back on solid ground.

^{38.} Tuiloma Neroni Slade, *The Making of International Law: The Role of Small Island States*, 17 TEMP. INT'L & COMP. L. J. 531, 531, 540 (2003) (discussing the vulnerability of small island nations to climate change, citing rising sea levels as the "most critical threat" from climate change and referencing Maldives President Gayoom's 1987 statement to the U.N. General Assembly that unless the international community takes steps to mitigate climate change, it would prove to be 'the death of [Maldives]."").

^{39.} Richard A. Kerr, *Warming Indian Ocean Wringing Moisture from the Sahel*, SCIENCE, Oct. 10, 2003, at 210 (suggesting that severe drought in the Sahel may be the result of climate change increasing the temperature of the Indian Ocean).

^{40.} P.J. Webster, G.J. Holland, J.A. Curry & H.R. Chang, *Changes in Tropical Cyclone Number, Duration, and Intensity in a Warming Environment*, SCIENCE, Sept. 16, 2005, at 1844 (noting a possible correlation between global climate change and increased hurricane characteristics in the North Atlantic region); Kevin Trenberth, *Uncertainty in Hurricanes and Global Warming*, SCIENCE, June 17, 2005, at 1753 (discussing factors contributing to an increase in hurricanes in the North Atlantic during the last decade).

^{41.} INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, WORKING GROUP III FOURTH ASSESSMENT REPORT 100 (2007), http://www.mnp.nl/ipcc/pages_media/FAR4docs/ final_pdfs_ar4/Chapter01.pdf (projecting a rise in sea level due to climate change); Lester R. Brown, *Rising Sea Level Forcing Evacuation of Island Country*, EARTH POL'Y INST., Nov. 15, 2001, http://www.earth-policy.org/Updates/Update2_printable.htm (noting that the projected rise in sea level threatens Florida beachfront properties to the extent that such properties "are becoming uninsurable.").

^{42.} John Hanna, John Milburn & Carl Manning, Kansas Regulator Rejects New Power Plants, CBS NEWS/ASSOCIATED PRESS, Oct. 19, 2007, http://www.cbsnews.com/stories/2007/10/19/tech/main3387356.shtml?source=search_story (discussing Kansas' "Secretary of Health and Environment" Ron Benby's decision to reject air permits for two new coal-fired power plants because of the plants' greenhouse gas emissions).

^{43.} Daniel A. Farber, Responses to Global Warming: The Law, Economics, and Science of Climate Change, 155 U. PA. L. REV. 1605, 1608 (2007).

III. RESPONSIBILITY FOR THE CLIMATE CRISIS (IN THEORY)

From a traditional lawyer's point of view, one of the keys to answering the now familiarly formulated questions regarding our response to the climate crisis turns on the meaning of a single word responsibility. Responsibility is a word at the heart of our legal tradition.

The climate crisis is not just bad weather-it is a human-caused thing⁴⁴ like a car accident, a polluted lake, or a bankrupt company. When we deal with human-caused crises-be it the Exxon Valdez oil spill or the Enron collapse—our first questions address: (1) who is going to pay the necessary response costs; (2) who has been injured; and (3) how and if we can redress those injuries. Sometimes, we agree that those costs should be borne by the injured themselves, and sometimes we determine that the injuries be redressed by society at large, but more often than not we identify responsible parties and get them to pay. Taken from another point of view, the question is: Who should we designate as responsible in order to avoid similar future harms and reset the "moral balance" through "corrective justice"? Generally, we make people we designate responsible pay damages. Even when we do not make them pay, or do not make them pay the full cost of compensation, we let them know their conduct is unacceptable, in order to discourage them and others like them from doing it in the future.

Responsibility does not necessarily mean fault. It just means responsibility. To illuminate slightly, let us consider four relevant types of responsibility. We can even diagram them in two sets—responsibility for past action and responsibility for future action as opposed to responsibility to pay and responsibility to do (or not do).

Responsibility to	Action for the Past→ Responsibility to Act (or Re-
Act	frain from Acting) to Remedy Existing Problems
	Action for the Future→ Responsibility to Act (or Refrain from Acting) to Prevent/Mitigate Future Problems

^{44.} See PANEL, supra note 17; OFFICE, supra note 17; GABRIELE C. HEGERL ET AL., UNDERSTANDING AND ATTRIBUTING CLIMATE CHANGE, CLIMATE CHANGE 2007: THE PHYSICAL SCIENCE BASIS 663, 665-66 (David J. Karoly et al. eds., Cambridge Univ. Press 2007), available at http://ipcc-wg1.ucar.edu/wg1/Report/AR4WG1_Print_Ch09.pdf (providing a scientific examination of the likelihood that humans have induced climate change).

Responsibility to Pay	Payment for the Past → Responsibility to Pay to Remedy Existing Problems.
	Payment for the Future → Responsibility to Pay to Prevent/Mitigate Future Problems

So, for example, in the "Action for the Past" box, we might place the Endangered Species Act take prohibition, which prevents anyone from engaging in an action that will injure members of a particular species of "fish or wildlife," not because each animal is inherently valuable but because past conduct has pushed that species to the brink of extinction.⁴⁵ Someday, according to the Fourth Circuit in *Gibbs v. Babbitt*, we may again be able to hunt red wolves, but we cannot hunt them now because there is only a handful left.⁴⁶ We are all, in theory, responsible to refrain from such conduct, but the burden falls disproportionately on farmers and ranchers who might want to kill red wolves to protect livestock. They are responsible in a way the rest of us are not.

In the "Action for the Future" box we can place classic off-street parking requirements.⁴⁷ Under the zoning codes of most American cities, if you undertake a land use, you are obligated to provide sufficient off-street parking to support it. Many of us who have strayed into the world of parking regulation have been amazed by the simplicity of offstreet parking mandates. In many cities, they are little more than a blunt statement that the user of a piece of land is responsible for providing the off-street parking his or her activity requires.⁴⁸ Still, these generic statements of responsibility have resulted in the investment of tens of billions of dollars in parking lots and structures.⁴⁹

In the "Payment for the Past" box, we can place CERCLA-type retroactive owner and operator responsibility—the obligation to pay money to clean up releases of hazardous substances that have already taken place. Absent a very narrow range of defenses, the Comprehensive Environmental Compensation, Response and Liability Act of 1980 (CERCLA)⁵⁰ renders all "owners and operators"⁵¹ of lands contaminated

^{45. 16} U.S.C.A. § 1538(a) (West 2008).

^{46.} See Gibbs v. Babbitt, 214 F.3d 483, 498 (4th Cir. 2000).

^{47.} See generally DONALD C. SHOUP, THE HIGH COST OF FREE PARKING (APA Planners Press 2004).

^{48.} See, e.g., DENVER, COLO., DENVER ZONING CODE art. VI, § 59-582 (2008).

^{49.} Keith Bawolek, *What Drives Parking Investments*, COM. INV. REAL EST., April 2004, *available at* http://www.ciremagazine.com/article.php?article_id=66 (noting that the parking industry gets over 20 billion dollars in parking revenues each year).

^{50. 42} U.S.C.A. § 9607(b) (West 2002) (providing statutory defenses that preclude CERCLA liability).

with "hazardous substances" responsible for the costs of clean up.⁵² Famously, CERCLA liability is not based on knowledge of wrongdoing or the illegality of any act at the time it was committed. Liability is limited to "response costs."⁵³

In the "Payment for the Future" box we can place local "development impact fees"—the obligation to pay money to mitigate conditions that will result from a development as yet un-built.⁵⁴ When developers pay development fees in order to receive approval for a development from a local land use authority, what they pay is supposed to approximate the burden their development will impose on the jurisdiction granting approval and receiving the fee.

These categories are imperfect, but I think you will find them handy because, if you keep them in mind, you will discover that many current proposed responses to the climate crisis avoid holding anyone responsible for the problem in any of these four ways.

According to the synthesis report of the International Panel on Climate Change (IPCC) in 2007, there are now measurable changes in the world climate. The damage caused by the climate crisis is both in the past and in the future. In the scientific/bureaucratic jargon of the IPCC: "Of the 29,000 observational data series, from 75 studies that show significant change in many biological systems, more than 89 percent are consistent with the direction of change expected as a response to warming."⁵⁵ These changes can be traced to emissions of greenhouse gases (most significantly carbon dioxide) dating back to the beginning of the industrial revolution.⁵⁶

The climate crisis has deep roots. However, greenhouse gas emissions are not like slavery and child labor (in the developed world): We cannot simply blame them on the dead. Annual emissions of greenhouse gases increased 70 percent between 1970 and 2004.⁵⁷ There are entities—major greenhouse gas emitters—around right now that we can hold

^{51. 42} U.S.C.A. § 9601(20)(A) (West 2002) (defining "owner or operator" for the purposes of CERCLA).

^{52. 42} U.S.C.A. § 9607 (West 2008).

^{53.} Kenneth P. Dobson, Methods and Motives for Imposing Strict Liability on Parties Hiring Independent Contractors to Transport Hazardous Materials in the State of Florida, 24 VT. L. REV. 1297, 1301 (2000) (explaining that "CERCLA's strict liability covers only 'response costs," holding former and current facility owners or operators liable for releasing hazardous substances into the environment); Kurt M. Brauer, Acushnet Company v. Coaters, Inc.: Defining the Role of Causation for CERCLA Response Cost Liability, 44 WAYNE L. REV. 1465, 1466 (1998) (explaining that CERCLA is a "strict liability" statute that allows parties to recover response costs for "releases, or threatened releases, of hazardous substances").

^{54.} See DEVELOPMENT IMPACT FEES IN THE ROCKY MOUNTAIN REGION (J. Bart Johnson & James van Hemert eds., The Rocky Mountain Land Use Inst. 2006).

^{55.} INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2007: SYNTHESIS REPORT 2 (Nov. 2007) [hereinafter IPCC].

^{56.} Id. at 5.

^{57.} Id.

777

responsible for a significant portion of the current stock of greenhouse gases. Using our "Payment for the Past" CERCLA responsibility model, we could make them pay to mitigate past emissions. Using our "Action for the Past" Endangered Species Act responsibility model we can make them modify their conduct to avoid making existing problems worse.

The greenhouse gas emissions problem is projected to get much worse. The IPCC Special Report on Emission Scenarios (2000) projects an increase of greenhouse gas emissions of between 25 and 90 percent between 2000 and 2030.⁵⁸ There are entities around today that we can hold responsible for those projected emissions. Using our "Payment for the Future" development fees responsibility model, we can make them pay money to mitigate the impact of their future emissions. Using our "Action for the Future" off-street parking responsibility model we can make them do things to reduce and offset their future emissions.

But should anyone be held responsible for the climate crisis? After all, are we not all responsible? In the past few hours I have vented both carbon dioxide and methane. Have my emissions been offset by my office plants? While we all may be nominally responsible, some actors in society are far more responsible than others. Imposing legal responsibility on them is far, far easier, morally and politically.

Even if justice does not interest us, the designation of responsible parties is still necessary to fashion effective remedial mechanisms. A simple hypothetical should illustrate this point.

In 2004, the United States Environmental Protection Agency (EPA) released a national greenhouse gas inventory. Carbon dioxide constituted 84.6 percent of greenhouse gases emitted in the United States.⁵⁹ The inventory lumps the vast majority of United States carbon dioxide emissions (almost 95 percent) in one category, fossil fuel combustion.⁶⁰ The inventory then divides fossil fuel combustion by sector. Transportation and electrical generation are by far the two largest sectors, with industry coming in a distant third.⁶¹ The bulk of greenhouse gas emissions in a developed country like the United States come from energy generation and transportation. While these sectors play a smaller role in the global inventory,⁶² they are still significant.

Now imagine it were otherwise. Imagine that the primary source of greenhouse gases in the United States was meat eating. In fact, meat

^{58.} Id. at 7.

^{59.} U.S. DEP'T OF STATE, CLIMATE ACTION REPORT 2006 21 (2007).

^{60.} Id. at 22.

^{61.} Id. at 25.

^{62.} For 2004, the IPCC divides the sources of anthropogenic greenhouse gas emissions globally into sections: Energy Supply (25.9 percent), Industry (19.4 percent), Forestry (including deforestation) (17.4 percent), Agriculture (13.5 percent), Transport (13.1 percent), Residential and Commercial Buildings (7.9 percent), and Waste (2.8 percent). IPCC, *supra* note 55.

eating is a source when you consider the indirect costs of raising, slaughtering, and transporting cattle, and transporting and refrigerating meat. In 2007, Britain's prestigious medical journal *The Lancet* reported that a reduction in global meat consumption would slow climate change.⁶³ This hypothetical is not far fetched. Still, it is a hypothetical.

If the primary cause of climate change were carnivory, would we approach the problem in the same way? Would a "cap and trade" system seem as appealing? Might a tax seem more attractive? How about an outright ban? I cannot tell you what your response to carnivory-caused climate change would be, but I am confident that it would be different than your response to climate change caused by vehicles and electric utilities.

What causes climate change, who is doing it, and what they can do about it must be near the foundation of any effective system to identify mechanisms to spread that cost equitably among those responsible parties, and identify measures to reduce those costs to the degree possible.

Who should be held responsible for greenhouse gas emissions from transportation and energy generation? Following the tenets of our environmental law tradition, the answer is energy generators and vehicle manufacturers. In 1970, in the Clean Air Act, we, as a nation, decided that air pollution was not everyone's responsibility, but rather the responsibility of major emitters of relevant air pollutants; they would be subjected to the now dreaded "command and control" requirements of that pioneering effort of environmental legislation. At the same time and in the same law, we decided that the manufacturers of motor vehicles should be held responsible for the emissions from the vehicles they manufactured and subjected to "command and control" standards.⁶⁴ Traditional air pollution is a "flow problem":⁶⁵ unlike greenhouse gases, traditional air pollutants do not accumulate over long periods of time so it does not matter what you emitted last week-just what you emit today.⁶⁶ As a result, the Clean Air Act subjected these two classes of parties to a form of responsibility akin to the "Action for the Future" offstreet parking requirement-box two in our handy chart. They were not required to pay anything, directly. They were required to modify their

^{63.} Maria Cheng, *Eating Less Meat May Slow Climate Change*, ENVTL. NEWS NETWORK, Sept. 13, 2007, http://www.enn.com/pollution/article/23011.

^{64.} RICHARD J. LAZARUS, THE MAKING OF ENVIRONMENTAL LAW 70-71 (Univ. of Chicago Press 2004) (discussing the implications of the Clean Air Act for the automotive industry).

^{65.} SCHLUMBERGER EXCELLENCE IN EDUCATIONAL DEVELOPMENT, GLOBAL CLIMATE CHANGE AND ENERGY: STOCK AND FLOW, http://www.seed.slb.com/en/scictr/watch/climate change/stock.htm (last visited March 26, 2008).

^{66.} ARNOLD W. REITZE JR., AIR POLLUTION CONTROL LAW: COMPLIANCE & ENFORCEMENT 411 (Envtl. Law Inst. 2001) (noting that greenhouse gases are unlike many other pollutants because efficient combustion does not prevent greenhouse gas formation); see also id. at 12-39 (providing a legal history of the Clean Air Act).

manufacturing processes to reduce emissions both from the processes themselves and from the products they manufactured.

These choices turned out to be wise. Air pollution regulation in the United States has been effective. According to EPA's 2003 "Draft Report on the Environment," between 1970 and 2001, while the United States Gross Domestic Product *increased* 161 percent, emissions of the six regulated "criteria" air pollutants (lead, particulates, nitrous oxides, sulfur dioxide, ozone, and carbon monoxide) *decreased* 25 percent.⁶⁷

The choices have also been cost effective. Section 812 of the Clean Air Act Amendments of 1990 requires EPA to periodically assess the effect of the Clean Air Act on the "public health, economy and environment of the United States."⁶⁸ In 1997, EPA generated its first such report: *The Benefits and Costs of the Clean Air Act, 1970 to 1990*. The Report found the total monetized benefits of the Clean Air Act during that 20 year period to be between 5.6 and 49.4 trillion dollars with a central estimate of 22.2 trillion dollars.⁶⁹ The report found the total direct compliance expenditures (imposed on responsible parties) to be 0.5 trillion dollars.⁷⁰ In 1999, EPA prepared a second report entitled *The Benefits and Costs of the Clean Air Act, 1990 to 2010*. This new report estimated a cost-benefit ratio of one to four.⁷¹

Rendering this limited group of entities responsible has encouraged innovation, limited economic dislocation, and offended few people's moral sensibilities. It has not, however, made those designated responsible parties happy.

IV. AVOIDING DESIGNATING RESPONSIBLE PARTIES FOR THE CLIMATE CRISIS (IN PRACTICE)

When it comes to legislating about the climate crisis, our federal elected officials (overwhelmingly lawyers) appear to leave their traditional legal thinking at home and act more like the bit part players in a disaster movie.

According to Professor Victor Flatt, as of October 17, 2007, there were at least ten legislative proposals in Congress to address climate

^{67.} ENVTL. PROT. AGENCY, DRAFT REPORT ON THE ENVIRONMENT 2003, at ii, 1-3 (2003), available at http://www.epa.gov/indicate/roe/html/roePDF.htm.

^{68.} Clean Air Act Amendments of 1990, Pub. L. No. 101-549, 104 Stat. 2691 (1990) (codified at 42 U.S.C. § 7612 (2006)).

^{69.} ENVTL. PROT. AGENCY, THE BENEFITS AND COSTS OF THE CLEAN AIR ACT, 1970 TO 1990, at ES-8 (1997), available at http://www.epa.gov/air/sect812/1970-1990/812exec2.pdf. 70. Id.

^{71.} ENVTL. PROT. AGENCY, THE BENEFITS AND COSTS OF THE CLEAN AIR ACT, 1990 TO 2010, at iii (1999), *available at* http://www.epa.gov/air/sect812/1990-2010/chap1130.pdf.

change—all proposed "cap and trade" approaches.⁷² I will mention only a few representative examples.

The most prominent piece of proposed climate change legislation currently before Congress is Senator Joseph Lieberman and Senator John Warner's "America's Climate Security Act of 2007" (S. 2191)—approved by the Senate Environmental and Public Works Committee on December 5, 2007. The bill, characterized on Senator Lieberman's website as creating "an economy-wide cap and trade program that provides maximum flexibility for the marketplace to meet a level of emission reductions that is environmentally credible,"⁷³ goes to some lengths to avoid designating anyone responsible for greenhouse gas emissions.

While the bill's Section 2 "findings" declare that "prompt, decisive action is critical" and that "it is possible and desirable to cap greenhouse gas emissions," it never actually states that greenhouse gas emissions are the cause of climate change.⁷⁴ The closest the bill comes to acknowledging this causal connection is in its Section 3 "Purposes," in which it declares that the purpose of the Act is to "establish the core of a Federal program that will reduce United States greenhouse gas emissions substantially enough between 2007 and 2050 to avert the catastrophic impacts of global climate change."⁷⁵

The bulk of the 214 page bill describes a mind-numbingly complex allowance trading system whereby greenhouse gas emitters trade "emission allowances" under slowly lowering emission allowance caps. In a "cap and trade" system, the primary opportunity for identifying any group of emitters as actually responsible for the projected climate catastrophe is in the allocation of emission allowances. If emitters were required to pay—prospectively and proportionally—for the right to push us all closer to the brink of catastrophic climate instability, then we would, at least, have a form of responsibility akin to "Payment for the Future" or development impact fees.

A responsibility analysis would suggest that the cost of emission allowances is dictated by the cost of eliminating or adapting to the consequences of those emissions. In fact, the Lieberman-Warner bill offers no link between the costs of emission allowances and the cost of responding to the consequences of those emissions. This absence of connection between the regulatory burden and the prospective costs of climate change is the primary missing link in the responsibility designation.

^{72.} Victor B. Flatt, Taking the Legislative Temperature: Which Federal Climate Change Legislative Proposal Is "Best"?, 102 NW. U. L. REV. COLLOQUY 123, 123, 135 (2007), available at http://colloquy.law.northwestern.edu/main/2007/12/taking-the-legi.html.

^{73.} Website of Senator Joe Lieberman of Conn., Climate Change, http://lieberman.senate.gov/issues/globalwarming.cfm (last visited March 26, 2008).

^{74.} America's Climate Security Act of 2007, S. 2191, 110th Cong. § 2(2), (4) (2007).

^{75.} Id. § 3(1).

2008]

The primary identification of who is affected by the legislation appears in the bill's definition of "covered facility," which includes large fossil fuel fired electric generating units, large industrial carbon dioxide emitters, major producers and importers of coal or petroleum-based transportation fuel, and producers and importers of chemicals that emit large quantities of greenhouse gases.⁷⁶ This seems a promising list. It includes most of the major sources of greenhouse gases in the United States.

Section 1202 of the bill bears the promising title: "Compliance Obligation."⁷⁷ The section requires the owner or operator of a "covered facility" to submit to EPA emission allowances, or a variety of other rough equivalents, to cover greenhouse gas emissions for the previous year.⁷⁸ But how do "covered facilities" get these emission allowances? The bill grants 12 percent of "emission allowances" free of charge to covered facilities on the basis of past emissions (rewarding past bad conduct) and allocates the rest (by shifting formula) to states, Indian tribes, and a newly created Climate Change Credit Corporation to auction off.⁷⁹

Referring back to our handy chart, the Lieberman-Warner cap and trade system does not require potentially responsible parties (admirably identified in the definition of "covered facilities") to *do* anything to remedy past or prevent/mitigate future problems. They can continue to emit greenhouse gases. Eventually, the bill would require that they *pay* something for the right to emit. But the connection between that payment and any remedy for an existing problem or solution to a future problem is tenuous. While not a complete subsidy for emitters, the structure—through its complexity if nothing else—avoids making a significant designation of responsibility.

Representative Henry Waxman's bill, H.R. 1590, the "Safe Climate Act of 2007," introduced on March 20, 2007, is more forthright and one tenth as long. Waxman's findings state that "decisive action is needed to minimize the many dangers posed by global warming" and that "with only 5 percent of the world population, the United States emits approximately 20 percent of the world's total greenhouse gas emissions and must be a leader in addressing global warming."⁸⁰ Waxman's bill specifically requires that emission "allowances" be issued through auctions in most cases.⁸¹ Still, Waxman's bill is largely bereft of language indicating responsibility for climate change or the causal link between cli-

^{76.} Id. § 4(7).

^{77.} Id. § 1202.

^{78.} *Id.* § 1202(a).

^{79.} Id. § 3301; see Website of Senator Joe Lieberman of Conn., S. 2191 Emission Allowance Allocation Table, http://lieberman.senate.gov/documents/acsaemission.pdf (last visited March 26, 2008).

^{80.} Safe Climate Act of 2007, H.R. 1590, 110th Cong. § 2(a)(7) (2007).

^{81.} Id. § 704(a), (d)(1)(A).

mate change and greenhouse gas emissions. Again, there is no explicit relationship between the costs of emission allowances and the projected costs of responding to the consequences of those emissions.

Another approach to responsibility appears in Senator Diane Feinstein's "Electric Utility Cap and Trade Act of 2007" (S. 317). Senator Feinstein's bill deals explicitly with the electric utility industry, defining an "affected unit" as "an electric generating facility."⁸² The bill regulates emissions from that group of potentially responsible parties alone. Ambiguity arises from the fact that it is not clear what others groups of responsible parties would be subject to similar treatment. As Professor Victor Flatt puts it:

The difficulty with cap-and-trade enforcement may be why two of the proposals (Feinstein-Carper and Alexander-Lieberman) only apply to the electricity sector. It has already been demonstrated that this sector can be efficiently regulated in a cap-and-trade system. However, limiting the law to this one sector means that overall emissions reductions cannot be as large. Moreover, it raises fairness concerns.... [These proposals] could be seen as compromise proposals that anticipate further legislation in other sectors....⁸³

The process in the international sphere is also remarkably free of meaningful responsible party designations. While the responsibility of developed world nations for the projected climate crisis affects every aspect of the negotiations, the negotiated documents do not address responsibility directly.

The 1992 Framework Convention on Climate Change designates 36 Annex I nations deemed "developed" and subject to more obligations in responding to climate change.⁸⁴ The nature of those obligations, however, is diffuse and the basis for the obligations is largely unstated. To the degree that the document deals with the basis of the developed world's obligation, it implies something more akin to *noblesse oblige* than responsibility:

Each of these [Annex I] Parties shall adopt national ... policies and take corresponding measures on the mitigation of climate change, by limiting its anthropogenic emissions of greenhouse gases and protecting and enhancing its greenhouse gas sinks and reservoirs. These policies and measures will demonstrate that developed countries are taking the lead in modifying longer-term trends in anthropogenic emissions consistent with the objective of the Convention, recognizing that the return by the end of the present decade to earlier levels of anthropogenic emissions of carbon dioxide and other greenhouse

^{82.} Elec. Util. Cap and Trade Act of 2007, S. 317, 110th Cong. § 701(1) (2007).

^{83.} Flatt, supra note 72, at 137-38 (2007) (footnotes omitted).

^{84.} UNITED NATIONS, UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE 6-

^{7,23 (1992),} available at http://unfccc.int/not_assigned/b/items/1417.php.

gases not controlled by the Montreal Protocol would contribute to such modification, and taking into account the differences in these Parties' starting points and approaches, economic structures and resource bases, the need to maintain strong and sustainable economic growth, available technologies and other individual circumstances, as well as the need for equitable and appropriate contributions by each of these Parties to the global effort regarding that objective.⁸⁵

The much discussed 1997 Kyoto Protocol to the United Nations Framework Convention on Climate Change is also based on an implicit, but unstated, notion of responsibility. Forty-one Annex I nations, developed countries in Europe and North America with the exception of Australia, Japan, New Zealand, bind themselves to meet specific greenhouse gas emissions targets.⁸⁶ The other nations of the world have no specific emission limitation obligations. The imposition of specific obligations on only 41 countries has been justified in terms of their historic responsibility for the currently high levels of greenhouse gases in the atmosphere, and also on the fact they contain the lion's share of the world's technological economy and therefore emit the lion's share of the world's greenhouse gases. China and India's exclusion from the Annex I nations, in the absence of any statement about responsibility—prospective or retrospective—has provided the United States with an excuse to avoid ratifying the Kyoto Protocol.⁸⁷

The documents adopted as part of the "Bali Roadmap" and "Action Plan" after the United Nations Climate Change Conference in Bali in December 2007, seem, if possible, a retreat from the idea of designating responsible parties.

Perhaps the strongest statement of "differentiated responsibilities" appears in *United Nations Framework Convention on Climate Change: The First Ten Years*:

The Convention laid down the foundation for these policies by both developing and developed countries, recognizing their common but differentiated responsibilities and respective capabilities. Although the most immediate responsibility for cutting greenhouse gas emissions lies with the richer and more industrialized countries, the developing countries too need to establish climate-friendly patterns of

^{85.} Id. at 6.

^{86.} See UNITED NATIONS, KYOTO PROTOCOL TO THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE 3, 20 (1998), available at http://unfccc.int/resource/docs/convkp/kpeng.pdf.

^{87.} David Sanger, Bush Will Continue to Oppose Kyoto Pact on Global Warming, N.Y. TIMES, June 12, 2001, at A1 ("Mr. Bush remained firm in rejecting the 1997 Kyoto accord, noting that it set no standards for major emitters of greenhouse gases, like China and India, while creating mandates for the United States that could prove economically crippling.").

sustainable development for which they should also be able to rely on bilateral and multilateral assistance.⁸⁸

V. THE STATES (IN LITIGATION) IDENTIFY RESPONSIBLE PARTIES

The title of this article alludes to the interrelationship between jurisdictions in responding to climate change. You may wonder, so far, what this analysis has to do with the relationship among jurisdictions. The answer, of course, is that while federal legislative solutions and international processes have shied away from designating responsible parties for climate change, litigation pursued by states has endeavored to designate responsible parties and, to date, has failed.

In July 2004, the States of Connecticut, New York, California, Iowa, New Jersey, Rhode Island, Vermont, and Wisconsin, and the City of New York, filed suit against American Electric Power Company, American Electric Power Service Corporation, the Southern Company, the Tennessee Valley Authority, XCEL Energy and CINERGY alleging claims of public nuisance under both federal and state law.⁸⁹ The complaint did not hesitate to designate responsible parties and set forth the bases of their responsibility. The complaint alleged damages already suffered and to be suffered in the foreseeable future:

Global warming already has begun to alter the climate of the United States. The threatened injuries to the plaintiffs and their citizens and residents from continued global warming include increased heat deaths due to intensified and prolonged heat waves; increased ground-level smog with concomitant increases in respiratory problems like asthma; beach erosion, inundation of coastal land, and salinization of water supplies from accelerated sea level rise; reduction of the mountain snow pack in California that provides a critical source of water for the State; lowered Great Lakes water levels, which impairs commercial shipping, recreational harbors and marinas, and hydropower generation; more droughts and floods, resulting in property damage and hazard to human safety; and widespread loss of species and biodiversity, including the disappearance of hardwood forests from the northern United States.⁹⁰

The complaint then alleged who was responsible:

^{88.} UNITED NATIONS, UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE: THE FIRST TEN YEARS 43 (2004), available at http://unfccc.int/resource/docs/publications/first_ten_years_en.pdf.

^{89.} Connecticut v. Am. Elec. Power Co., 406 F. Supp. 2d 265, 267-68 (S.D.N.Y. 2005); see also Andrew C. Revkin, New York City and 8 States Plan to Sue Power Plants, N.Y. TIMES, June 12, 2004, at A5. A copy of the original complaint filed in the district court, Complaint, Connecticut v. Am. Elec. Power Co., 406 F. Supp. 2d 265, 267-68 (S.D.N.Y. 2005), is available at http://www.oag.state.ny.us/press/2004/jul/jul21a_04_attach.pdf.

^{90.} Complaint, Am. Elec., 406 F. Supp. 2d at 1-2.

Defendants, by their annual emissions of approximately 650 million tons of carbon dioxide, are substantial contributors to elevated levels of carbon dioxide and global warming. Defendants are the five largest emitters of carbon dioxide in the United States and are among the largest in the world. Defendants' emissions constitute approximately one quarter of the U.S. electric power sector's carbon dioxide emissions and approximately ten percent of all carbon dioxide emissions from human activities in the United States.⁹¹

Finally, the complaint alleged how the responsible parties could mitigate or eliminate the problem through their actions:

Defendants have available to them practical, feasible and economically viable options for reducing carbon dioxide emissions without significantly increasing the cost of electricity to their customers. These options include changing fuels, improving efficiency, increasing generation from zero- or low-carbon energy sources such as wind, solar, and gasified coal with emissions capture, co-firing wood or other biomass in coal plants, employing demandside management techniques, altering the dispatch order of their plants, and other measures.⁹²

The complaint deftly sketches out the basis for legal responsibility: the gravity of the threat, the injuries that can reasonably be expected to result from it, the significance of the defendants' contribution to the threat, and the defendants' capacity to mitigate if not eliminate the threat. Lawyers were at work.

At the end of more than 50 pages of allegations, plaintiffs requested an order to hold the defendants "jointly and severally liable for creating, contributing to, and/or maintaining a public nuisance; [p]ermanently enjoining each defendant to abate its contribution to the nuisance by requiring it to cap its carbon dioxide emissions and then reduce them by a specified percentage each year for at least a decade" and, of course, "such other relief as this Court deems just and proper."⁹³ In essence, the states requested that: (1) defendants be held liable for their past and future conduct, roughly the equivalent of "Payment for the Past" CERCLA-type liability for past emissions and "Payment for the Future" development fees for future emissions; and (2) that defendants be ordered to refrain from some future conduct reasonably anticipated to make the problem worse, roughly the equivalent of the "Action for the Past" Endangered Species Act take prohibition. In other words, they demanded that the court hold the defendants responsible.

^{91.} Id. at 1.

^{92.} Id. at 2.

^{93.} Id. at 49.

On September 20, 2006, the State of California filed suit against General Motors, Toyota Motors North America, Ford Motor Company, Honda North America, Chrysler Motors, and Nissan North America in another public nuisance case.⁹⁴ Again, the plaintiff clearly alleged the basis for liability. While setting forth in detail the actual and potential damage to California's snowpack and coastline, the complaint alleged: "Defendants, by their annual emissions in the United States of approximately 289 million metric tons of carbon dioxide are substantial contributors—among the world's largest contributors—to global warming and to the adverse impacts on California."⁹⁵

The complaint also alleged that "[d]amages caused by global warming are cognizable, ongoing and increasing. Defendants are aware of the impacts and have chosen to continue to produce products that generate enormous quantities of carbon dioxide, to the detriment of California."⁹⁶

Again, the elements of the argument for legal responsibility are clear: the gravity of the threat, the injuries that can reasonably be expected to result from it, the significance of the defendants' contribution to the threat, and the defendants' capacity to mitigate, if not eliminate, the threat.

In a significant departure from the Connecticut model, California requested only that the court "[h]old each defendant jointly and severally liable for creating, contributing to and maintaining a public nuisance" and for "monetary damages according to proof."⁹⁷ California's allegations limit responsibility to an obligation to pay, both for past and future injury.

The strong statements of alleged responsibility embodied in these two complaints were filed in federal district courts—in the Southern District of New York and Northern District of California. Had the litigation been allowed to proceed, the courts would have developed a factual record to support (or contradict) the state's allegations. Both complaints, however, were dismissed.

In September 2005, the United States District Court for the Southern District of New York dismissed the Connecticut complaint on "political question" grounds in deference to the very modest legislative action taken by the federal government to combat climate change at that time.⁹⁸ The court emphasized the need to leave the question to the "ac-

^{94.} California v. Gen. Motors Corp., No. C06-05755 MJJ, 2007 WL 2726871 (N.D. Cal. Sept. 17, 2007) (order granting defendants' motion to dismiss).

^{95.} Complaint at ¶ 3, California v. General Motors Corp., 2006 WL 2726547 (Sept. 20, 2006) (No. 06-05755 MJJ).

^{96.} *Id.* 97. *Id.*

^{97. 10}

^{98.} See Connecticut v. Am. Elec. Power Co., 406 F. Supp. 2d 265, 274 (S.D.N.Y. 2005).

countable" political branches of government.⁹⁹ "Because resolution of the issues presented here requires identification and balancing of economic, environmental, foreign policy, and national security interests," the court found that "a policy determination" was required.¹⁰⁰ The court largely ignored the fact that plaintiffs represented the "political branches" in eight states and the nation's largest city and that—in the absence of federal action—those political entities had few other mechanisms to discharge their political obligations to their constituents. More significantly for our purposes, the court dismissed state claims offering a theory of responsibility in favor of a barely identifiable federal policy offering none.

The district court ruling in *Connecticut v. American Electric Power* is currently on appeal to the United States Court of Appeals for the Second Circuit.¹⁰¹ In September 2007, the United States District Court for the Northern District of California dismissed California's complaint on similar grounds. The court dismissed on political question grounds, again deferring to the limited legislation already enacted by Congress.¹⁰² The court went further, indicating that the United States Supreme Court's grant of standing to state plaintiffs in *Massachusetts v. EPA*¹⁰³ somehow required dismissal of state plaintiffs' claims in *California v. General Motors Corp.*¹⁰⁴

Quoting the majority opinion in *Massachusetts*, the court argued that the fact that "Massachusetts cannot invade Rhode Island to force reductions in greenhouse gas emissions" somehow deprives Massachusetts or California of the right to sue General Motors in federal court.¹⁰⁵ The court argued that the Clean Air Act precluded California's suit: "Underpinning the Supreme Court's standing analysis is the concept that the authority to regulate carbon dioxide lies with the federal government, and more specifically with the EPA as set forth in the [Clean Air Act]."¹⁰⁶ The court avoided traditional preemption analysis to deprive the State of its common law rights for the simple reason that the Clean Air Act contains two broad "savings clauses" preserving state common law jurisdiction¹⁰⁷ for all parties including, arguably, the United States,¹⁰⁸

^{99.} Id. at 267.

^{100.} Id. at 274.

^{101.} See Brief of Amici Curiae, U.S. Senator James M. Inhofe and the Washington Legal Foundation in Support of Defendants-Appellees and Supporting Affirmance of the District Court, Connecticut v. American Elec. Power Co., 406 F. Supp. 2d 265 (S.D.N.Y. 2005) (No. 05-5104), available at http://www.wlf.org/upload/Connecticut%20%20v.%20American%20Electric%20-Power%20Compa ny,%20Inc.pdf.

^{102.} General Motors Corp., 2007 WL 2726871, at *8-10, *16.

^{103. 127} S. Ct. 1438 (2007).

^{104.} General Motors Corp., 2007 WL 2726871, at *10-13.

^{105.} Id. at *11.

^{106.} *Id*.

^{107. 42} U.S.C.A. §§ 7416, 7604(e) (West 2008).

^{108.} United States v. Atlantic-Richfield Co., 478 F. Supp. 1215, 1220 (D. Mont. 1979).

but almost certainly the states. In a remarkably creative justification for dismissing a common law nuisance claim, the court declared:

Because the States have "surrendered" to the federal government their right to engage in certain forms of regulations and therefore may have standing in certain circumstances to challenge those regulations, and because new automobile carbon dioxide emissions are such a regulation expressly left to the federal government, a resolution of this case would thrust this Court beyond the bounds of justiciability.¹⁰⁹

The district court ruling in *California v. General Motors Corp.* is also on appeal to the United States Court of Appeals for the Ninth Circuit.¹¹⁰

Both the Connecticut and California courts rely on the third prong in the traditional six-part *Baker v. Carr*¹¹¹ political question justiciability test articulated by the United States Supreme Court in 1962: "the impossibility of deciding without an initial policy determination of a kind clearly for nonjudicial discretion."¹¹² As the California court put it: "This factor largely controls the analysis in the current case due to the complexity of the initial global warming policy determinations that must be made by the elected branches prior to the proper adjudication of Plaintiff's federal common law nuisance claim."¹¹³ As the Connecticut court put it: "In this case, balancing those interests, together with the other interests involved, is impossible without an 'initial policy determination' first having been made by the elected branches to which our system commits such policy decisions, viz., Congress and the President."¹¹⁴

It is not entirely clear what "balancing of economic, environmental, foreign policy, and national security interests" the courts would demand from federal elected officials before they would be comfortable considering the existence and scope of defendants' responsibility for the damages associated with climate change. What is clear is that they do not want to be the first to determine who should be held responsible for the climate crisis.

CONCLUSION

We could characterize the contrast between the federal legislative proposals, based on emission trading and avoiding the designation of responsible parties, and the state complaints in litigation, designating

^{109.} General Motors Corp., 2007 WL 2726871, at *12.

^{110.} See Appellant's Opening Brief, California v. General Motors Corp., 2007 WL 27226871 (9th Cir. 2008) (No. 07-16908), available at http://ag.ca.gov/globalwarming/pdf/ninth_circuit_-brief.pdf.

^{111. 369} U.S. 186 (1962).

^{112.} Id. at 217.

^{113.} General Motors Corp., 2007 WL 2726871, at *6.

^{114.} Connecticut v. Am. Elec. Power Co., 406 F. Supp. 2d 265, 272 (S.D.N.Y. 2005).

responsible parties, as either a conflict or a frustrated symbiotic relationship. My natural optimism favors the second possibility. We need not follow the example of the district court opinions in *Connecticut v. American Electric Power* and *California v. General Motors Corp.* and emphasize the potential conflicts between the litigation process initiated in the state public nuisance cases and the legislative process going on in Congress. Instead, we can emphasize how these two very different legal processes might support each other. If the states, or other plaintiffs, are ever able to sustain cases like the Connecticut and California public nuisance cases in court, they will develop factual records regarding the responsibility of the named defendants for the climate crisis. By doing so, they could help us do the one thing both national legislative and international quasi-legislative processes seem incapable of doing: they could help us identify responsible parties.

If we are fortunate, the next stage in this gestational process toward a regulatory scheme to deal with the climate crisis will involve both focusing on classes of responsible parties and identifying workable mechanisms for dividing the costs of response to climate change among them. For now, we can only hope.